

10/582404 FERROCENE

=> d his

(FILE 'HOME' ENTERED AT 15:57:34 ON 07 JAN 2008)

FILE 'HCAPLUS' ENTERED AT 15:57:46 ON 07 JAN 2008

L1	0 S BISINDENYLFERROCENE
L2	0 S FERROCENE/PREP
L3	19795 S FERROCENE
L4	0 S "BISINDENYL FERROCENE"
L5	2 S "SEC-PHOSPHINO"
L6	904 S RUTHENOCENE
L7	444 S L3 AND L6
L8	0 S L7/PREP

FILE 'STNGUIDE' ENTERED AT 16:04:14 ON 07 JAN 2008

L9	0 S PHOSPHINO
----	---------------

FILE 'HCAPLUS' ENTERED AT 16:07:31 ON 07 JAN 2008

L10	3704 S PHOSPHINO
L11	235 S L3 AND L10
L12	4 S L11 AND L6

10/582404 FERROCENE

=> d his

(FILE 'HOME' ENTERED AT 15:57:34 ON 07 JAN 2008)

FILE 'HCAPLUS' ENTERED AT 15:57:46 ON 07 JAN 2008

L1 0 S BISINDENYLFERROCENE
L2 0 S FERROCENE/PREP
L3 19795 S FERROCENE
L4 0 S "BISINDENYL FERROCENE"
L5 2 S "SEC-PHOSPHINO"
L6 904 S RUTHENOCENE
L7 444 S L3 AND L6
L8 0 S L7/PREP

FILE 'STNGUIDE' ENTERED AT 16:04:14 ON 07 JAN 2008

L9 0 S PHOSPHINO

FILE 'HCAPLUS' ENTERED AT 16:07:31 ON 07 JAN 2008

L10 3704 S PHOSPHINO

=> s l3 and l10

L11 235 L3 AND L10

=> s l11 and l6

L12 4 L11 AND L6

=> d 1-4 ibib abs hitstr

L12 ANSWER 1 OF 4 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2007:1101862 HCAPLUS

DOCUMENT NUMBER: 148:10924

TITLE: Palladium-catalyzed asymmetric allylic alkylation with an enamine as the nucleophilic reagent

AUTHOR(S): Liu, Delong; Xie, Fang; Zhang, Wanbin

CORPORATE SOURCE: School of Chemistry and Chemical Technology, Shanghai Jiao Tong University, Shanghai, 200240, Peop. Rep. China

SOURCE: Tetrahedron Letters (2007), 48(43), 7591-7594

CODEN: TELEAY; ISSN: 0040-4039

PUBLISHER: Elsevier Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB An enamine can serve as a good nucleophile for Pd-catalyzed asym. allylic alkylation, avoiding the use of an unstabilized ketone enolate formed by strong bases. In the presence of a Pd complex of chiral metallocene-based phosphino-oxazoline ligands, the reaction was carried out smoothly with high catalytic activity and excellent enantioselectivity. Different distances between the two Cp rings of ferrocene and ruthenocene affected the catalytic behavior in the reaction. Furthermore, high catalytic activity and good enantioselectivity were also afforded by the ferrocene-based diphosphine ligands with only planar chirality.

REFERENCE COUNT: 64 THERE ARE 64 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 2 OF 4 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2006:932310 HCAPLUS

DOCUMENT NUMBER: 147:118344
 TITLE: Synthesis and structures of 1,1'-bis(diphenylphosphino)metallocenyl complexes
 $M(\eta^5\text{-C}_5\text{H}_4\text{PPh}_2)_2\text{Ru}(\text{H}_2\text{O})_2(\text{OTs})_2$ ($M = \text{Fe, Ru, or Os}$)
 AUTHOR(S): Peganova, T. A.; Vologdin, N. V.; Petrovskii, P. V.; Nesterov, I. D.; Lyssenko, K. A.; Gusev, O. V.
 CORPORATE SOURCE: A. N. Nesmeyanov Institute of Organoelement Compounds, Russian Academy of Sciences, Moscow, 119991, Russia
 SOURCE: Russian Chemical Bulletin (2006), 55(4), 683-686
 CODEN: RCBUEY; ISSN: 1066-5285
 PUBLISHER: Springer
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB The reaction of equimolar amts. of $M(\eta^5\text{-C}_5\text{H}_4\text{PPh}_2)_2$ ($M = \text{Fe, Ru, or Os}$) and $[\text{Ru}(\text{H}_2\text{O})_6](\text{OTs})_2$ afforded the $M(\eta^5\text{-C}_5\text{H}_4\text{PPh}_2)_2\text{Ru}(\text{H}_2\text{O})_2(\text{OTs})_2$ complexes, which were characterized by elemental anal. and ^1H , ^{13}C , and ^{31}P NMR spectroscopy. The structure of the osmocene complex was established by x-ray diffraction.
 REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 3 OF 4 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2005:514356 HCAPLUS
 DOCUMENT NUMBER: 143:211998
 TITLE: Operando High-Pressure NMR and IR Study of the Hydroformylation of 1-Hexene by 1,1'-Bis(Diarylphosphino)metallocene-Modified Rhodium(I) Catalysts
 AUTHOR(S): Bianchini, Claudio; Oberhauser, Werner; Orlandini, Annabella; Giannelli, Carlo; Frediani, Piero
 CORPORATE SOURCE: Istituto di Chimica dei Composti Organometallici, ICCOM-CNR, Sesto Fiorentino, 50019, Italy
 SOURCE: Organometallics (2005), 24(15), 3692-3702
 CODEN: ORGND7; ISSN: 0276-7333
 PUBLISHER: American Chemical Society
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 143:211998
 AB Some rhodium(I) complexes of the general formula $[\text{Rh}(\text{P-P})(\text{COD})]\text{X}$ were synthesized and characterized by multinuclear NMR spectroscopy (COD = cycloocta-1,5-diene; P-P = 1,1'-bis(diphenylphosphino)ferrocene, dppf, X = BPh₄, PF₆; P-P = 1,1'-bis(diphenylphosphino)ruthenocene, dppr, X = BPh₄; P-P = 1,1'-bis(diphenylphosphino)osmocene, dppo, X = BPh₄, PF₆; P-P = 1,1'-bis(diphenylphosphino)octamethylferrocene, dppomf, X = BAR'₄; P-P = (1,1'-bis(di(o-isopropylphenyl)phosphino))ferrocene, o-iPr-dppf, X = BAR'₄). These complexes were employed as catalyst precursors for the hydroformylation of 1-hexene in THF either in standard autoclaves or in high-pressure (HP) NMR tubes and IR cells. All catalysts exhibited good activity (TOFs ranging from 700 to 1000 mol aldehyde (mol cat)⁻¹ h⁻¹) and moderate regioselectivity in n-heptanal (67-74%). Irresp. of the rhodium precursor, the HP-NMR expts. under catalytic conditions showed the formation of kinetic dicarbonyl products at room temperature, which were independently prepared by reaction of the COD precursors with 1 bar CO in THF. Square-planar dicarbonyl complexes containing two cis carbonyl groups were obtained with the dppf and dppomf ligands, while the precursors with the dppr, dppo, and o-iPr-dppf ligands gave trigonal-bipyramidal dicarbonyl complexes with the equatorial positions occupied by two carbonyl groups and by the metallocene metal

atom. The complexes $[\text{Rh}(\text{CO})_2(\text{dppf})]\text{PF}_6$ and $[\text{Rh}(\text{CO})_2(\text{dppo})]\text{PF}_6$ were isolated in the solid state and characterized by single-crystal x-ray anal. On increasing gradually the temperature of the HP-NMR hydroformylation expts., the dppf, dppr, and dppo dicarbonyl complexes disappeared. Formed in their place were neutral five-coordinate hydride(dicarbonyl) complexes $\text{RhH}(\text{CO})_2(\text{P-P})$ that exist in solution as two rapidly equilibrating geometric isomers. The reaction of the o-iPr-dppf precursor with syngas at 60 °C gave a trigonal-bipyramidal dicarbonyl complex with a dative Fe-Rh bond, while the dppomf complex decomposed to various CO-containing rhodium complexes. Unlike HP-NMR spectroscopy, HP-IR spectroscopy showed no kinetic product at any stage of the catalytic reactions. Also, HP-IR spectroscopy allowed us to distinguish the ee and ea geometric isomers of the hydride(dicarbonyl) resting states with dppf, dppr, and dppo. Irresp. of the temperature, o-iPr-dppf formed a stable dicarbonyl complex as a result of the catalytic reaction, while the dppomf dicarbonyl was unstable under hydroformylation conditions, converting into phosphine-free carbonyl Rh compds.

REFERENCE COUNT: 70 THERE ARE 70 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 4 OF 4 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1998:345620 HCAPLUS

DOCUMENT NUMBER: 129:161688

TITLE: Enantioselective preparation of C2-symmetrical ferrocenyl ligands for asymmetric catalysis

AUTHOR(S): Schwink, Lothar; Knochel, Paul

CORPORATE SOURCE: Fachbereich Chem., Philipps-Univ. Marburg, Marburg, D-35032, Germany

SOURCE: Chemistry--A European Journal (1998), 4(5), 950-968
CODEN: CEUJED; ISSN: 0947-6539

PUBLISHER: Wiley-VCH Verlag GmbH

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 129:161688

AB Corey-Bakshi-Shibata (CBS) reduction of the 1,1'-diacylmetallocenes of Fe and Ru (e.g. 1,1'-(ClCH₂CH₂CH₂C(O))₂ferrocene) provides the C2-sym. diols 4 (e.g. (R,R)-1,1'-(MeCH(OH))₂ferrocene) and 10, which proved to be useful starting materials for stereo-controlled ligand synthesis. Diols 4 and 10 can be easily converted to a wide range of diamines, diphosphines, and dithioacetates by nucleophilic substitution of the hydroxyl function with full retention of configuration. Also, the aminophosphines 30 (e.g. (αR,α'R)-2,2'-bis(α-(dimethylamino)(phenyl)methyl)-(S,S)-1,1'-bis(diphenylphosphino)ferrocene) and 31 (the Ru analog of the example for 30) become easily accessible. Compds. 30 and 31 were used as ligands complexed to Pd in enantioselective cross-coupling of racemic secondary Grignard reagents with vinyl bromides. A selectivity up to 93% ee could be reached for the 1st time in the preparation of

(S)-(E)-1,3-diphenyl-1-butene, which was transformed into the enantiomerically pure chiral building block (2R,4R)-2,4-diphenyl-3-pentanol with a pseudoasym. center in a straightforward, three-step synthesis.

REFERENCE COUNT: 93 THERE ARE 93 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d his

10/582404 FERROCENE

(FILE 'HOME' ENTERED AT 15:57:34 ON 07 JAN 2008)

FILE 'HCAPLUS' ENTERED AT 15:57:46 ON 07 JAN 2008

L1 0 S BISINDENYLFERROCENE
L2 0 S FERROCENE/PREP
L3 19795 S FERROCENE
L4 0 S "BISINDENYL FERROCENE"
L5 2 S "SEC-PHOSPHINO"
L6 904 S RUTHENOCENE
L7 444 S L3 AND L6
L8 0 S L7/PREP

FILE 'STNGUIDE' ENTERED AT 16:04:14 ON 07 JAN 2008

L9 0 S PHOSPHINO

FILE 'HCAPLUS' ENTERED AT 16:07:31 ON 07 JAN 2008

L10 3704 S PHOSPHINO
L11 235 S L3 AND L10
L12 4 S L11 AND L6